



## MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Jennifer M. Granholm, Governor • Steven E. Chester, Director

### REMEDIATION AND REDEVELOPMENT DIVISION

INTERNET: [www.michigan.gov/deqrrd](http://www.michigan.gov/deqrrd)

## INFORMATION BULLETIN #2

### FORMER SANICEM LANDFILL

Orion Charter Township/City of Auburn Hills, Oakland County

July 2006

#### INTRODUCTION

This is the second information bulletin from the Department of Environmental Quality (DEQ) Remediation and Redevelopment Division (RRD) regarding environmental conditions and actions taken to address contamination from the former Sanicem Landfill (Landfill).

The former owners and operators of the Landfill, J. Fons Company and Daniel P. Fons (collectively, liable parties), are responsible for past landfill activities that have contaminated the soil and groundwater and lead to the generation of methane gas (see *Methane Gas*) in the soils north of the Landfill. The DEQ is taking steps to investigate and mitigate the risk from the Landfill contamination and ensure the liable parties comply with their obligations under Michigan's cleanup law: Part 201 (Environmental Remediation) of the Michigan Natural Resources and Environmental Protection Act (NREPA), PA 451 of 1994.

#### SITE HISTORY

The Landfill is located on South Lapeer Road in Oakland County. The liable parties owned and operated the 140 acre property as a landfill from 1969 to 1978. Waste is currently on about 60 acres of the property. During the Landfill's operation, inspections conducted by the DEQ identified numerous deficiencies in how the landfill was operated, which resulted in the DEQ denying a permit to operate the Landfill bringing about its final closure.

The waste in the Landfill continues to decompose, producing methane gas that is migrating away from the Landfill and posing a potentially serious public health and safety risk (see *Methane Gas*).

In 2002, the Brown Road Group, L.L.C. (BRG) purchased the Landfill for redevelopment from the

liable parties. BRG conducted a Baseline Environmental Assessment, which under Michigan's cleanup law (Part 201 of NREPA) exempts them from liability for past contamination resulting from the Landfill. BRG does however have an obligation to ensure its use of the property does not worsen the existing contamination; it must also make certain the future use of the property does not pose unacceptable risks to public health and safety.

#### LEGAL OBLIGATIONS/ ENFORCEMENT ACTIONS

The liable parties are responsible for mitigating any hazards created and to clean up the environmental contamination; they have failed to meet these obligations. In addition, the liable parties have not complied with a June 16, 2005 Administrative Order (AO), requiring them to: 1) perform certain response activities to mitigate the methane risk, and 2) further define the extent of the methane in the soil gas (the air that fills the voids between soil granules) north of the Landfill. Through a lawsuit filed on July 31, 2006 in the Ingham County Circuit Court against the liable parties, the DEQ is seeking enforcement of the AO, full cleanup of the Landfill contamination, reimbursement of the state's past and future response activity costs, and fines and penalties.

#### METHANE GAS

Methane is a colorless, tasteless, odorless, flammable gas that is generated by decomposition of landfill wastes. Fires and explosions, resulting in significant property damage, have occurred in cases where methane gas has migrated from a landfill into adjacent structures or other areas where ignition sources (e.g., electrical outlets, electrical appliances, pilot lights, static electricity, or open flames) are present.

Fire and explosion can result if methane accumulates at concentrations between five percent (lower explosive limit) and 15 percent (upper explosive limit) in the air of a confined space, and is exposed to an ignition source. Higher methane concentrations above 15 percent should also be considered dangerous, since high concentrations can result in asphyxiation (suffocation by displacing oxygen) or quickly dilute to explosive levels.

The DEQ RRD has determined that areas where methane is present at 1.25 percent by volume in soil gas poses an acute flammability and explosivity hazards. Consequently, areas where methane exceeds 1.25 percent in soil gas require that actions be taken to eliminate the acute risks of methane accumulation in buildings.

### **INVESTIGATION, MITIGATION AND PUBLIC SAFETY**

Previously, methane was discovered under pressure in the soil gas at the northern landfill property line at over eight times (42%) the lower explosive limit for methane, and found to exceed the level (1.25% in soil gas) at which action should be taken to mitigate potential explosion hazards under or near at least 13 commercial buildings (see Methane Gas).

The DEQ has continued to delineate the extent and concentration of methane by installing nine additional monitoring points throughout the Northpointe and Kay Industrial Drive area. The investigation shows that a shallow clay layer seems to exist across the area. Methane was found beneath the clay layer down to the water table, which is about 110 to 115 feet below the surface. If continuous and cohesive, the shallow clay layer may act as a barrier that limits the upward migration of the methane gas. However, eight of the nine monitoring point locations exhibited methane concentrations above the actionable level of 1.25% (some as high as 56%) as far as 2,400 feet north of the Landfill property line. As a result, further investigation is needed to determine the full extent of the presence of methane along the north boundary of the Landfill, as well as the other three sides of the Landfill.

Based on the recent information collected, methane alarm installation was expanded to six additional commercial buildings in the area north of the Landfill. To date, methane alarms have sounded

only in the two buildings located directly adjacent to the Landfill property line where methane alarms were previously installed. Where alarms were triggered, preliminary abatement measures of ventilation control and sealing floor seams, as well as permanent methane monitors have been instituted. For other buildings in the area, the DEQ is currently in the process of connecting the methane alarms to each buildings' existing fire/building protection alarm system.

With a loan from Oakland County, BRG has proposed installing a methane extraction system on the Landfill, which is scheduled to be operational this summer. Methane vents throughout the Landfill and along the north property line will be connected to a flare. This system will be designed to control methane on the Landfill by venting and burning the flammable gas.

Additional investigation is necessary to determine the extent of the threat, and the need for methane removal options will be assessed. As part of this ongoing project, the continued cooperation of property owners near the Landfill for access or other response activities may be requested.

### **FOR MORE INFORMATION**

For more comprehensive information on the project and activities, please contact the DEQ project manager:

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The DEQ is coordinating with the Orion Charter Township Fire Department where the high concentrations of methane are known to occur. For emergency conditions, please contact your local fire department:

- Auburn Hills Fire Department, 248-370-9461
- Orion Township Fire Department, 248-373-4660

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